

**REMARKS****I. STATUS OF THE CLAIMS**

Claims 1-70 are pending and under consideration. Claims 32-36, 52-63 and 66-70 have been withdrawn. Claims 1 and 37 have been amended. Proper support for the amendment to the claims can be found in the specification at least at paragraphs [0026] and [0044]. Claims 1 and 37 are the independent claims.

No new matter is believed to have been added. Reconsideration is respectfully requested.

**II. THE REJECTION UNDER 35 U.S.C. §102**

Claims 1-9, 17-27 and 64 are rejected under 35 U.S.C. §102(b) as being anticipated by Shiratori et al. (U.S. Patent 5,648,134).

Applicants respectfully traverse this rejection for at least the following reason.

Independent claim 1 recites a multi-layer structure comprising, amongst other novel features, a transformation layer formed on the substrate, wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a **resist pattern on the multi-layer structure**, the resist pattern having a size **smaller than a diffraction limit of the laser beam**.

Shiratori discloses a magneto-optical recording medium comprising a magnetic layer 3 formed on a transparent substrate 1 and on a dielectric layer 2, and a dielectric layer 4 formed on the magnetic layer 3 (column 3, lines 41-49).

Shiratori also discloses that the magnetic layer can consist of a rare earth-iron group amorphous alloy having 10 to 50% of at least one rare earth element, and 90 to 50% of at least one iron group element.

Accordingly, although Shiratori discloses a multi-layer structure including a layer formed on a substrate and consisting of a rare earth-iron group amorphous alloy, Shiratori fails to teach or suggest a transformation layer formed on the substrate, wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a **resist pattern on the multi-layer structure**, the resist pattern having a size **smaller than a diffraction limit of the laser beam**.

Accordingly, Applicants respectfully assert that the rejection of claim 1 under 35 U.S.C. §102(b) should be withdrawn because Shiratori fails to teach or suggest each feature of independent claim 1.

As pointed out in MPEP § 2131, "[t]o anticipate a claim, the reference must teach every element of the claim." Thus, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. Of California, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987)."

Furthermore, Applicants respectfully assert that the rejection of dependent claims 2-9, 17-27 and 64 under 35 U.S.C. §102(b) should be withdrawn at least because of their dependence from claim 1 and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 2-9, 17-27 and 64 also distinguish over the prior art.

Claims 1, 10-12, 37, 42-44 and 65 are rejected under 35 U.S.C. §102(b) as being anticipated by Shigeta et al. (U.S. Patent 4,626,480).

Applicants respectfully traverse this rejection for at least the following reason.

Independent claim 1 recites a multi-layer structure comprising, amongst other novel features, a transformation layer formed on the substrate, wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a **resist pattern on the multi-layer structure**, the resist pattern having a size **smaller than a diffraction limit of the laser beam**.

Independent claim 37 recites a master for manufacturing an optical disc, the master comprising, amongst other novel features, a transformation layer formed on the substrate, wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a **resist pattern on the master**, the resist pattern having a size **smaller than a diffraction limit of the laser beam**.

Shigeta discloses a magnetic recording medium characterized by a magnetic thin film formed on at least one side of a non-magnetic substrate. The magnetic thin film is made of a magnetic material and a tungsten oxide (column 2, lines 9-15).

Accordingly, although Shigeta teaches a multi-layer structure, Shigeta fails to teach or

suggest a multi-layer structure comprising a transformation layer on the substrate, wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a resist pattern on the multi-layer structure, the **resist pattern** having a size **smaller than a diffraction limit of the laser beam**, as recited in independent claim 1.

Shigeta also fails to teach or suggest a multi-layer structure comprising a transformation layer formed on the substrate, wherein a volume of a portion of the transformation layer irradiated by a laser beam changes when a temperature of the portion exceeds a predetermined temperature forming a **resist pattern on the master**, the resist pattern having a size **smaller than a diffraction limit of the laser beam**, as recited in independent claim 37.

Accordingly, Applicants respectfully assert that the rejection of claims 1 and 37 under 35 U.S.C. § 102 (b) should be withdrawn because Shigeta fails to teach or suggest each feature of independent claims 1 and 37.

Furthermore, Applicants respectfully assert that the rejection of dependent claims 10-12, 42-44 and 65 under 35 U.S.C. §102(b) should be withdrawn at least because of their dependence from claims 1 and 37 and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 10-12, 42-44 and 65 also distinguish over the prior art.

### III. THE REJECTION UNDER 35 U.S.C. §103

Claims 38-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shiratori et al. as applied to claim 37.

Applicants respectfully traverse this rejection for at least the following reason.

Claims 38-41 depend from claim 37 and as noted above, Shiratori fails to teach or suggest each feature of independent claim 37.

Accordingly, Applicants respectfully assert that the rejection of dependent claims 38-41 under 35 U.S.C. §103(a) should be withdrawn at least because of their dependence from claim 37 and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 38-41 also distinguish over the prior art.

Claims 13-16, 28-31, 45 and 49-51 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shiratori et al. as applied to claims 1 and 37 in view of Shigeta et al. as applied to claims 1, 10, 37 and 42.

Applicants respectfully traverse this rejection for at least the following reason.

Claims 13-16, 28-31, 45 and 49-51 depend from claims 1 and 37 and as noted above neither Shiratori nor Shigeta, whether taken singly or combined, teach or suggest each feature of independent claims 1 and 37.

Accordingly, Applicants respectfully assert that the rejection of dependent claims 13-16, 28-31, 45 and 49-51 under 35 U.S.C. §103(a) should be withdrawn at least because of their dependence from claims 1 and 37 and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 13-16, 28-31, 45 and 49-51 also distinguish over the prior art.

## VII. CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN, MCEWEN & BUI, LLP

Date: 1/25/06

By: Douglas X. Rodriguez  
Douglas X. Rodriguez  
Registration No. 47,269

1400 Eye St., NW  
Suite 300  
Washington, D.C. 20005  
Telephone: (202) 216-9505  
Facsimile: (202) 216-9510